

WHAT IS CLAIMED IS:

1. A safety device for protecting a worker from accidental energization or potential rise due to ground fault events of a distribution cable, comprising a main insulated gap formed between two conductors, a
5 precision gap between said two conductors, and connected in parallel with said precision gap a surge arrester and a resistor in series.
2. The safety device of claim 1 wherein said precision gap comprises a
10 gap arrester.
3. The safety device of claim 2 wherein said gap arrester comprises a gas discharge tube arrester.
4. The safety device of claim 2 wherein said gap arrester has a
15 breakdown voltage between 100V and 10,000V.
5. The safety device of claim 2 wherein said gap arrester has a breakdown voltage of approximately 3000V.
- 20 6. The safety device of claim 1 wherein said surge arrester comprises an MOV arrester.
7. The safety device of claim 1 wherein said main gap comprises two
25 conductors separated by an insulated space.
8. The safety device of claim 7 wherein said main gap comprises two
conductive bars secured together and insulated from each other.
9. The safety device of claim 1 wherein said surge arrester has a voltage
30 rating below that of the precision gap.
10. The safety device of claim 1 wherein said surge arrester has a voltage
rating approximately 10% below that of the precision gap.

11. The safety device of claim 1 wherein said resistor is a linear resistor.
12. The safety device of claim 11 wherein said resistor has a resistance from 20 to 10,000 ohms.
- 5 13. The safety device of claim 11 wherein said resistor has a resistance from 50 to 100 ohms.
- 10 14. The safety device of claim 1 wherein said precision gap comprises a triggered gap which comprises an intelligent control to trigger the breakdown of said gap.